

REMARKS

Status of the Application

Claims 1-13 are all the claims pending in the application. Independent claims 1 and 11-13 have been amended. No new matter has been added.

Rejection under 35 U.S.C. §101

Applicant respectfully requests the Examiner to withdraw the rejection of claim 13 under 35 U.S.C. §101. In making this rejection, the Examiner pointed out that the claim was directed to a computer program per se. As now amended, the claim is drawn to a computer readable medium storing a computer program, which falls squarely within the statutory class of a manufacture. Applicant therefore respectfully requests the Examiner to withdraw this rejection of independent claim 13.

Rejection under 35 U.S.C. §102

The Examiner rejected claims 1-3, 5, 8, 9, and 11-13 under 35 U.S.C. §102 as being anticipated by Suzuki. Applicant respectfully traverses this rejection, first with respect to independent claim 1.

Independent claim 1

Claim 1, as now amended, recites:

a first storage storing the print job data wherein the print job data pertaining to a given print job comprises an indication of a plurality of objects;

a job status monitor for creating job status information for each one of the objects by monitoring operations carried out by the printer or printers in connection with printing of the plurality of objects, wherein, when job status information is received for any one of the plurality of objects of a given print job, the job status

information is updated so as to provide updated job status information stored in a second storage;

a controller performing a determining function including responding, to a printing error indication with respect to one of the plurality of objects, by determining whether the printer or printers has or have recovered from one or more printing error states to one or more states permitting printing; and

the controller, in the event that it is determined that the printer or printers has or have recovered to the state or states permitting printing, selecting one or more objects from among the plurality of objects based on the print job data stored at the first storage means and the updated job status information stored at the second storage means, and causing resumption of printing with respect to only the selected object or objects.

Claim 1 now clearly recites that "the print job data pertaining to a given print job comprises an indication of a plurality of objects". In Suzuki, there is no such print job data. The Examiner's position is that there is some teaching in Suzuki that meets such a requirement. In particular, the Examiner points to the fact that Suzuki divides up bit-map page data into fractional sets of band data (e.g., Suzuki col 2, lines 62-65). This teaching is not the same as print job data indicating a plurality of objects. The fractional sets of band data in Suzuki are all parts of the same identical object (an entire page of bit-map data) and not different objects. Since Suzuki lacks any concept of a print job having an indication of a plurality of objects, Suzuki also lacks any teaching or suggestion relating to how to handle such objects in the event of an error.

Claim 1 also recites "when job status information is received for any one of the plurality of objects of a given print job, the job status information is updated so as to provide updated job status information stored in a second storage". Suzuki does not have a plurality of objects in any print job, so it also does not update job status information with respect to when job status

information is received for any one of a plurality of objects. In the example printouts shown in Applicant's own Fig. 9a, objects 003 and 004 are distinct from each other and are itemized separately in the print job. When handling data in band units, however, bands correspond to contiguous parts of the page to be printed, and have no way to discriminate with respect to objects in a print job. Suzuki lacks any concept of updating job status information on an object basis (i.e., no job status information in Suzuki is ever received "for any one of the plurality of objects of a given print job").

Claim 1 also recites "selecting one or more objects from among the plurality of objects based on the print job data stored at the first storage means and the updated job status information stored at the second storage means." Suzuki does not keep updated job status information. Suzuki does not use the concept of a plurality of objects and so there is no selecting of objects.

In Suzuki, there are only two possibilities when errors arise. If the error is something minor like "cover open", printing is merely suspended until the cover is closed, and it resumes (see "(1) Printer Errors" in col. 13 of Suzuki and also col. 14, lines 56-67. Claim 1 requires "a controller performing a determining function including responding, to a printing error indication with respect to one of the plurality of objects". That is, the printing error indication is related to an object. The minor "cover open" and similar errors mentioned in Suzuki are not the kind of errors that relate to the printing of an object, and therefore this teaching in col. 14, lines 56-67 does not relate to the kind of errors mentioned in the claims.

In Suzuki, the second type of error is a serious error that is a printing output error (see (2) Print Result Errors and (3) Fatal Errors in cols. 13 and 14). For these kinds of errors, "the printer 3 must again print the same page from the beginning." (Col. 14, lines 4-5 and 24-25). The Suzuki

error recovery for this type of printer output situation always prints the whole page over, and there is no selection of a particular object for printing.

In view of these points, even if it were reasonable for the Examiner to read the requirement for a plurality of objects in claim 1 on the teaching of Suzuki of a number of bands (it would be unreasonable but this point is made for the sake of further analysis), it is still clear that Suzuki never selects one of the bands on the basis of print job information and updated status information. Suzuki always selects all the bands of a page for reprinting.

Claim 1, however, requires "resumption of printing with respect to only the selected object or objects."

For all of the foregoing reasons, Applicant respectfully submits that claim 1, as now amended, patentably distinguishes over Suzuki. Applicant therefore respectfully requests the Examiner to withdraw this rejection of independent claim 1.

Independent claim 2

Independent claim 2 expressly requires "print job data containing a plurality of objects", "job status information is created for each one of the objects", "one or more objects is or are selected from among the plurality of objects based on the stored print job data and the stored job status information", and "printing of the selected object or objects is resumed."

Applicant respectfully submits that it is clear from the earlier discussion of independent claim 1 that Suzuki does not teach or suggest any of these particular requirements found in independent claim 2. For analogous reasons, therefore, Applicant respectfully submits that independent claim 2 patentably distinguishes over the teachings of Suzuki. Applicant therefore respectfully requests the Examiner to withdraw this rejection of independent claim 2, and also its dependent claims 3, 5, 8, and 9.

Independent claims 11-13

The selection and resumption of printing vis-à-vis selected objects is a requirement that appears in the remaining independent claims 11-13. In view of the foregoing comments, Applicant respectfully requests the Examiner also to withdraw this rejection of independent claims 11-13.

Rejection under 35 U.S.C. § 103(a)

The Examiner has rejected claims 4, 7 and 10 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Suzuki in view of Wanda (6,474,881). In addition, the Examiner has rejected claim 6 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Suzuki in view of Teng et al. (6,327,045, hereinafter Teng).

The Wanda and Teng references do not remedy the above-identified deficiencies of Suzuki. Even taken together, for what they would have meant to the artisan of ordinary skill, the combined teachings of Suzuki, Wanda, and Teng would not have (and could not have) led such a person to the subject matter of even the independent claims, much less the subject matter of the dependent claims rejected on this basis.

Furthermore, these references cannot be combined with Suzuki, which requires the use of "dumb" printers. The combination is respectfully submitted to be one that would destroy the functionality of the approach shown in Suzuki.

Applicant therefore respectfully requests the Examiner to withdraw each of these rejections under 35 U.S.C. §103.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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